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Reply to Office Action of August 22, 2005

REMARKS

Claims 1-6 were previously canceled. Claims 7, 8, 12 and 13 have been amended. Claims 14-21 have been indicated as allowable. Claims 7-21 remain in the application.

The Examiner indicated that claim 8 would be allowable if rewritten in independent form. Claim 8 has been amended accordingly. The Applicant respectfully submits that claim 8 is now in a condition for allowance.

Claims 7-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stephenson (US 1,921,642) in view of Fruck (US 4,400,019) and at least one of German 583 (DE 195 21 583) and Suendermann (WO 99/29491). The Applicant respectfully traverses this rejection.

U.S. Patent Number 1,921,642 to Stephenson discloses a pipe joint for connecting pieces of pipe 10 using an annular collar 20. The collar has an inner cylindrical tube 21 and a concentric outer cylindrical tube 21, and a connecting portion between a midportion of the inner and outer tubes. The structural arrangement of the inner cylindrical tube, outer cylindrical tube and connecting portion form two grooves, each having an inclined wall, and separated by the connecting portion. The edges of the pipe are disposed in the groove, and each of the two grooves may be filled with an adhesive. Stephenson does not disclose that the linear connecting wall interconnects the rear end of the inner tube to the rear end of the outer tube, and that the inner tube, outer tube and connecting wall define one cylindrically shaped annular gap, as disclosed by the Applicant.

U.S. Patent Number 4,400,019 to Fruck discloses a multilayer pipe joint. The joint includes a pipe 10 having an outer steel casing 12, and an inner plastic pipe 13, with an annulus 16 formed between the two pipes. The joint 18 includes a metal outer band 20 and an inner band

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22. One end of the joint 18 adaptively fits within the annulus 16 of the section of pipe. The outer lips 30 and inner lips 32 of the band 22 are separated by a slot 34. An epoxy bond 38 ring is positioned adjacent the inner and outer lips. Fruck '019 does not disclose a linear connecting wall secured to the rear end of an inner tube and a rear end of a concentric outer tube, and that defines one cylindrically shaped gap, and a compact ring of hot melt adhesive is disposed in the annular gap adjacent the connecting wall and occupying less than the entire volume of the annular gap, as disclosed by the Applicant.

U.S. Patent Number 6,627,036 to Suendermann merely discloses a method for bonding plastic objects together using a hot-melt type of adhesive. The pipes 1 and 2 include screw shaped components 3 made of hard PVC. Between the screws 3 are other components 4 made from soft PVC, which enable the pipes 1 and 2 to be deformed. Disposed within the pipes 1, 2 is an inner pipe 5 made of polyurethane. The terminal ends of the pipes 1, 2 are heated, and a hot-melt adhesive is introduced and forms a bond between the pipes. Suendermann '036 does not disclose a linear connecting wall secured to the rear end of an inner tube and a rear end of a concentric outer tube that defines one cylindrically shaped outer gap, and a compact ring of hot melt adhesive disposed in the annular gap adjacent the connecting wall and occupying less than the entire volume of the annular gap, as disclosed by the Applicant.

The German reference merely discloses a pin and socket pipe joint having an outer pipe 2 that is corrugated at one end 5 to form a groove on the inside 6. The inner pipe is disposed inside the outer pipe, and a gap 8, 9 is formed therebetween. The gap includes an adhesive layer 7 on either side of the groove, preferably in the form of a ring of hot-melt glue. The German reference does not disclose a linear connecting wall secured to the rear end of an inner tube and a rear end of a concentric outer tube, and that defines one cylindrically shaped outer gap, and a

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compact ring of hot melt adhesive disposed in the annular gap adjacent the connecting wall and occupying less than the entire volume of the annular gap, as disclosed by the Applicant.

In contradistinction, claim 7 discloses a tubular coupling element for a glued joint with a fluid line. The tubular element includes an inner tube having a front end and a rear end, and the front end is insertable into a fluid line. The tubular coupling element further includes an outer tube having a front end and a rear end that is concentric to the inner tube. The length of the front end of the inner tube is longer than the length of the front end of the outer tube. The tubular element also includes a connecting wall having a linear shape, and connecting the rear end of the inner tube to the rear end of the outer tube. The outer tube, connecting wall and inner tube define one cylindrically shaped annular gap, and a solid ring of heat melt adhesive is disposed within the annular gap and positioned against the connecting wall. The solid ring of adhesive fills less than the full volume of the annular gap.

None of the references, alone or in combination with each other, teach or otherwise suggest the claimed invention of claims 7 or 11. Stephenson merely discloses an outer tube, and an inner tube, and a wall interconnecting the midportion of the inner tube to the midportion of the outer tube, so as to form two grooves, one groove positioned between the front end of the inner tube and the front end of the outer tube and the wall, and a second groove positioned between the rear end of the inner tube and the rear end of the outer tube and the wall. This is clearly not the same structure as the linear connecting wall defining a flat surface interconnecting the rear end of the outer tube to the rear end of the inner tube, to form one groove positioned between the inner tube and the outer tube, as disclosed by the Applicant. The structural relationship between the inner tube, outer tube and connecting wall in Stephenson is clearly distinguishable from the present invention. Further, Stephenson is clearly distinguishable since it

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does not disclose one annular gap, as disclosed by the Applicant, but two annular gaps. In fact, the teachings of Stephenson teach away from the present invention, since Stephenson teaches that each gap is inclined, as shown at 11 in FIGS. 1 and 2. This is clearly distinguishable from the structure of Applicant's invention, whereby one groove is formed by the structural arrangement of the inner wall and outer wall, to the connecting wall. These are critical features which distinguish the present application over Stephenson '642.

Fruck likewise does not disclose, anticipate or otherwise suggest the claimed invention of claims 7 or 11. Fruck merely discloses the use of an epoxy bond o-ring as a sealing means. The German reference '583 and Suendermann '036 merely clarify the adhesive as a hot melt adhesive. These references do not disclose the linear connecting wall defining a flat surface and connecting the rear end of the outer tube to the rear end of the inner tube, to form one groove positioned between the inner tube and the outer tube, and a ring of adhesive disposed in the gap and positioned against the connecting wall, or that the solid ring of hot melt adhesive occupies less than the full volume of the annular gap, as disclosed by the Applicant.

The combination of references, if even combinable, would not render obvious Applicant's invention as claimed in claim 7 as amended. The combination of Stephenson with Fruck, Suendermann or the German reference, would yield an outer tube, and an inner tube, and a wall interconnecting the midportion of the inner tube and the midportion of the outer tube, so as to form two grooves, one groove positioned between the front end of the inner tube, the front end of the outer tube, and the wall, and a second groove positioned between the rear end of the inner tube, the rear end of the outer tube, and the wall. A ring of hot-melt adhesive would be disposed in each of the two annular gaps.

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Such a proposed structure is clearly distinguishable from Applicant's invention, in that the present invention includes a tubular coupling element formed by an inner tube having a front end insertable into a fluid member that is longer than a front end of an outer tube, and a rear end of the inner tube is connected to a rear end of a concentric outer tube by a linearly extending connecting wall, and an adhesive ring is disposed in the one cylindrically shaped annular gap and positioned adjacent the connecting wall. In addition, the proposed combination is distinguishable since the adhesive occupies less than the entire volume of the annular gap. Further, the proposed combination is distinguishable since the heating element is not external, but is embedded in the tubular coupling element. Neither of these references discloses an inner tube joined at a rear end to a concentric outer tube, and the front end of the inner tube is longer than the front end of the outer tube. Neither of these references discloses a removable heating element. Neither of these references discloses one annular gap having a cylindrical shape with a ring of hot melt material disposed in the annular gap and against a connecting wall, or that the ring of adhesive occupies less than the entire volume of the annular gap.

Therefore, it is respectfully submitted that claims 7 and 11 as amended and the claims dependent therefrom are allowable over the rejection under 35 U.S.C. §103(a).

Claims 9-10 and 12-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stephenson (US 1,921,642) in view of Fruck (US 4,400,019) and at least one of German 583 (DE 195 21 583) and Suendermann (WO 99/29491), and further in view of Europe (EP 0 289 831) and optionally Great Britain (GB 2 133 496). The Applicant respectfully traverses this rejection for the reasons set forth above with respect to claim 7.

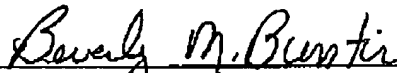
Based on the above, Applicant submits that the claims are in condition for allowance, which allowance is respectfully solicited. If the Examiner finds to the contrary, it is respectfully

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requested that the undersigned in charge of this application be called at the telephone number given below to resolve any remaining issues.

Respectfully submitted,



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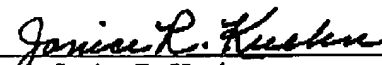
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CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being forwarded to the United States

Patent Office via facsimile (571-273-8300) on November 22, 2005.



Janice R. Kuehn